Alaska Department of Labor and Workforce Development

Alaska State Energy Sector Partnership

Training Alaska's Workforce for Careers in the Efficiency and Renewable Energy Industries

ALASKA DEPARTMENT OF LABOR & WORKFORCE DEVELOPMENT

Commissioner Clark Bishop
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ABSTRACT
Project Title: Alaska's State Energy Sector Partnership

Applicant: Alaska Department of Labor and Workforce Development

Area Served: Statewide

Focus: The Alaska State Energy Sector Partnership will develop a sustainable strategic workforce plan to increase the supply of workers with energy efficiency skills to support Energy Efficiency End User Technology, Geothermal, Hydroelectric, Wind Turbine and Biomass industries. At least 700 workers will receive training and over 85 percent of participants will be employed in an energy efficiency occupation. Employment and training will develop professionals, technicians and new workers.

Funding Request: $3,500,000

ABSTRACT
Alaska has the highest energy prices in the nation. Although the state is the second largest US producer of oil, it ranks sixth among states for high electricity costs. Many rural homeowners pay $6-8 per gallon for heating fuel. Because of the added costs of transporting fuel, most villages pay between $0.25 and $1.00 per kWh compared to the national average of $0.11 per kWh for electricity.

The Governor has set a goal of achieving 50 percent of energy from renewable sources by 2015. In 2008, the state legislature created the Alaska Renewable Energy Grant fund to invest $300 M in renewable energy and another $360 M for residential weatherization and home energy rebates. Additional American Recovery Act and private investment for energy efficiency projects create a demand for more than 3,000 workers to weatherize homes and structures, develop and operate renewable energy projects.

Alaska State Energy Sector Partners include the Alaska Workforce Investment Board, the Alaska Department of Labor and Workforce Development, the Alaska Department of Commerce and Economic Development, the Alaska Department of Education and Early Childhood Development, the Alaska Energy Authority, the Alaska Housing Finance Corporation, the Denali Commission, the University of Alaska, the Alaska AFL-CIO, Alaska Works Partnership, plumbing and electrical joint-apprentice committees, and Regional Advisory Councils whose members include Alaska Native entities, industry employers, Local Job Centers, regional economic development corporations, non-profits, regional training centers and college campuses.

ASESP members include Cabinet officials, public agency leads, educators, labor and non-profit executives able to effectively develop and implement industry training strategies across the State. ASESP members are committed to strengthening and expanding the existing Partnership by identifying and addressing gaps among the required and suggested partner organizations as recommended by the US DOL.

Two primary activities of the ASESP are:

1. Strategic planning and full development of the State Energy Sector Plan, which includes local and regional project teams, and,
2. Oversight, implementation and successful operation of the State Energy Sector Plan, as well as leveraging American Recovery Act resources, and other activities that will enhance the operations of local and regional project teams.

The initial ASESP plan will focus on five "green job" technologies.

1. Energy Efficiency End Use Technologies
2. Hydro Electric Technologies
3. Wind Energy Technologies
4. Biomass Energy Technologies
5. Geothermal Technologies

The Plan proposes a robust recruitment, seamless integration of supportive services to help targeted populations, use of the One Stop Career Center delivery system for case management of participants, and a competitive process to connect participants with high-quality, industry based training that leads to degrees and certificates. Methods of training include; course related instruction, on-the-job training and customized training with existing federally registered apprenticeship programs and labor-management partners, technology based learning, distance education, and other quality training methods. Training will be offered at times and locations that are most convenient and accessible to participants, particularly those living in rural communities. Follow-up and retention services will be provided for individuals offering resources necessary to attain economic self-sufficiency.

Four preliminary goals of the Plan are:

1. Upgrade the skills of professionals, crafts and trades workers and apprentices involved in construction, power generation and transmission, facility operations and maintenance, and weatherization.

2. Significantly reduce energy consumption and carbon emissions through weatherization of homes, structures and facilities, and bring on line new sources of renewable energy.

3. Develop "green" job education and occupational training opportunities, following a career ladder, that lead students and adults to jobs and careers.

4. Deliver training in every region to ensure local workers have skills to increase energy conservation, manage local energy resources and develop renewable energy sources.

The ASESP will guide the Alaska Workforce Investment Board, the Alaska Department of Labor and Workforce Development and the Alaska Job Center Network in the distribution of USDOL grant funds and connect leveraged resources for job training in green technologies that meet the needs of employers. In addition, a "green" career pathway will be introduced in Alaska's existing Career and Technical Education (CTE) system. Training funds will be provided to registered apprenticeship sponsors to upgrade the skills of apprentices and journey level workers, to postsecondary vocational, career and technical education providers, and qualified non-profit trainers to ensure education and training occurs in every region of the state.

Local and regional project teams consist of members of existing Regional Advisory Councils (RAC) established by the AWIB, which include management from local job centers. RACs will help identify and refer candidates to training, and connect workers with employers that have job openings. Through a competitive process, members of the RACs, ASESP and AWIB in partnership with the state workforce agency will assist in the identification, assessment and selection of training providers that are ready to meet industry needs.

The ASESP is responsible for oversight, advocating for workforce development resources, assessing the effectiveness of workforce strategies, and advising the AWIB on the appropriate level of investment in the energy industry sectors.

- **Describe the State's existing energy policies, any specific policies for the creation of jobs in the energy efficiency and renewable energy industries.**

Page one of Alaska's 2009 annual Workforce Investment Act/Wagner-Peyser Act State Plans describes the energy sector as "an economic sector that promises high job growth and demand for skilled, trained labor." Governor Sean Parnell's policy on renewable energy and energy efficiency is clear and specific, "within the next ten years 50 percent of Alaska's energy source will come from renewable energy. "

Alaska is the nation's second highest producer of fossil fuels in America. It is also the leader in high cost for energy. Electricity in Alaska's rural villages ranges between $0.25 and $1.00 per kWh compared to the national average of $0.11 per kWh. In 2000 Alaska's median family income was more than $51,000 per year. In the rural area of the Yukon-Koyukuk census area the median family income was less than $29,000 per year and paid nearly ten times more for energy than the rest of the nation. To address this gross inequity Alaska is following its 2004 long term energy plan which identifies numerous private and public steps taken towards reliable, economic sustainable energy including funding for education of Alaska's workforce in the energy industry. The plan provides for the inventory and assessment of renewable energy options.

According to a 2006 independent review of the Denali Commission energy program, "the 36 rural power system upgrades … have resulted in considerable cost savings

through improved efficiency." In 2007 the Alaska Village Electric Co-op won the Wind Co-op of the year award for displacing more than 80,000 gallons of diesel fuel at an average cost of $2.75 per gallon and reducing carbon emissions by more than 240 tons. In 2008 the Alaska Legislature created the Alaska Renewable Energy Grant Fund and authorized $300 million for renewable energy projects and approved another $360 million in state funds for the Alaska Housing Finance Corporation to fund a weatherization and energy rebate program that will upgrade the energy efficiency of as many as 26,000 homes in Alaska. Recently, the state received American Recovery and Reinvestment Act (ARRA) funding for "green jobs." In total nearly $3 billion is invested in Alaska which is driving renewable energy and energy efficiency policy and the demand for "green workers."

To meet the demand for skilled "green workers", the Alaska Department of Labor and Workforce Development, the Denali Commission, the Alaska Energy Authority and the Alaska Housing Finance Corporation combined have provided training in weatherization, bulk fuel installation and power plant generation to more than 1, 000 Alaskans since 2008.

- **Describe the data and analysis of the current and projected employment opportunities by occupation in the energy efficiency and renewable energy industry and other industries.**

In a survey of "green jobs" in five states; construction, transportation, and scientific and technical industries consistently ranked in the top five. Similarly, it is expected the

same three industries are likely to grow in response to Alaska's economic issues as well as the national trend toward carbon emission reductions. In Alaska between 2006 and 2016 the expected job growth rate for the three industries ranges between 11 percent for transportation and 28 percent for the scientific and technical services. In terms of job openings in Alaska this totals more than 20,000 job openings by 2016.

Non-residents working in Alaska provide additional pressure to prepare Alaskans for Alaskan jobs. In 2007 non-resident workers in Alaska represented almost 20 percent of the total labor force. In the construction industry, non-resident workers represented 19 percent while in the scientific and technical industry the rate was more than 18 percent. Further non-resident earnings increased greater than residents at a rate of 7.9 percent. Alaskans are anxious to fill Alaskan jobs that require more skills and knowledge.

Alaska's economy is expected to grow by 14 percent over the next ten years. With the investment by the Alaska legislature and ARRA funding and the recent decline in the state's economy, workers are looking to transition to jobs with long term futures in high demand with good wages.

- **Demonstrate how skills and competencies gained through training activities apply to the industries.**

Renewable energy and energy efficiency are characterized by the measurable change in carbon emissions, energy loss and cost savings. The techniques and technologies used in energy efficiency and renewable energy require unique skills in order for successful application.

The technology associated with end user energy efficiency strategies is mature and evolving. Because of technogical developments that occur over time owners, operators and end users must keep current on the technology. Constant education and outreach will ensure the skills and competencies are current with industry demand.

The table below summarizes a few occupations and core skills and knowledge that Alaska's green energy workforce is expected to know compared to the work to be performed. While much of the work has some familiarity, developments in technology, materials and process require additional and advanced training for workers to perform at industry standards.

OCCUPATIONS	KNOWLEDGE AND SKILLS	WORK TO BE PERFORMED
Weatherization Technician I	Safe work practices, building science, combustion safety, blower door 1	Air sealing, duct sealing, installation of materials in crew capacity
Weatherization Technician II	Advance building science, maximum depressurization, appropriate materials, blower door 2, client education	Inspection and measurement, diagnostic testing, combustion appliance safety, installation and training
Auditor/Building Analyst	Safe work practices, building science diagnostics, computer analysts, client education	Inspection and measurement, diagnostic testing, combustion appliance safety, measure selection, and work scope development
Building Envelope Specialist	Proper installation of variety of building components	Installer of weatherization materials
Insulation Specialist	Dense pack, outside wall insulation, blow-In applications, spray On applications	Application of specific insulation techniques
Air Sealing Specialist	Two part foam, bypass with rigid foam, duct sealing	General and bypass airs sealing and duct sealing
Crew lead/Foreman	Lead safe work practice, OSHA, crew management, Inventory	Directs safe work practices, manages crews on site, responsible for inventory, enforces OSHA

OCCUPATIONS	KNOWLEDGE AND SKILLS	WORK TO BE PERFORMED
Heating and Ventilation Specialist	Heating system diagnostics, repair/replace heating systems/sizing, repair and replace fans and HRV systems	Diagnoses heating and ventilation systems for health and safety and efficiency, repairs or replaces H&V components
Contractor	Business management personnel and payroll inventory management	Bids on projects, holds licensing, inventory and supervises install of appropriate materials
Quality Control Inspector	Safe work practice local and national codes diagnostics Interpretation	Interim/final inspections verifies energy savings and compliance with code
Wind Analyst	Site evaluation equipment selection	Analyzes sites for appropriate wind generators, selects appropriate system
Wind Installer and Operator	Install equipment develop maintenance plan train operators	Installs wind generator systems instruct client on M&O
Geothermal Heat Pump Installers	Plumbing & mechanical skills, equipment diagnostics	Installs geothermal heat pumps
Digital Control System Technician	Heating, ventilation, air conditioning digital control installation, settings and trouble shooting	Installs, calibrates, and repairs digital control systems

- **Data and analysis of the characteristics of the State's labor force.**

The area of the state of Alaska considered for training is almost two fifths the size of the United States, Appendix 4, yet has fewer paved road miles than the smallest state. The energy grid in rural Alaska does not exist. Rather it is a collection of independent utilities serving small villages. The Rail Belt represents a 450 mile region of the state that has the only integrated grid utility system in the state. There are no significant cross border distribution systems. Rural Alaska has numerous independent community based utilities managed through cooperatives.

Alaskans entering career paths are unprepared academically and lack the necessary credentials to meet industry standards for training and developing the state's renewable

energy workforce. According to the Alaska Energy Authority, many of the rural Alaskan utilities have a demand for skilled workers in the following occupations; Advanced Power Plant Operator, Bulk Fuel Operator, Hydroelectric Power Plant Operator, Utility Managers, Utility Bookkeepers, Power Plant Maintenance workers and other Building, Maintenance and Repair specialists with knowledge of energy efficiency technology. More than 55,000 Alaskans do not have a high school diploma. In rural Alaska more than 25 percent of the residents age 25 and above do not have a high school diploma or GED. In 2006 the Fairbanks School District reported that 32 percent of students did not earn their high school diploma within four years of entering ninth grade. Alaska's Joint Administered Apprenticeship Programs require a high school diploma or GED to enter a registered apprenticeship. President Mark Hamilton of the University of Alaska lamented the excessive amount of University resources expended on remediation of incoming students to prepare them to learn.

Sample areas of the State and 2000 Census information	**Statewide Area**	**Fairbanks North Star Borough**	**Nome Census Area**	**Yukon-Koyukuk Area**	**Ketchikan Census Area**
Population					
Total Population	626,932	82,940	9,196	6,551	14,070
Income					
Median Household Income	$51,571	$56,478	$41,250	$28,666	$51,344
Poverty					
Persons w/income < poverty	57,602 (9.4%)	6,206 (7.8%)	1,569 (17.4%)	1,554 (25.7%)	900 (6.5%)

Sample areas of the State and 2000 Census information	Statewide Area	Fairbanks North Star Borough	Nome Census Area	Yukon-Koyukuk Area	Ketchikan Census Area
Families w/income < poverty	10,270 (6.7%)	1,137 (5.5%)	305 (16%)	269 (18.1%)	164 (4.5%)
Educational Attainment (adults 25+)	379,556	47,977	4,916	3707	8,999
<9th grade	15,663	1,007 (2.2%)	714 (14.5%)	540 (14.6%)	205 (2.3%)
9th-12th, no Diploma		2881 (6%)	525 (10.7%)	412 (11.1%)	727 (8.1%)
High School Graduate (GED)	165,812 (27.3%)	12,240 (25.5%)	1,871 (38.1%)	1,459 (39.4)	6,673 (29.7%)
Some College, no Degree	108,442 (28.6%)	15,254 (31.8%)	950 (19.3%)	659 (17.8%)	2,961 (32.9%)
Associate's Degree	27,213 (7.2%)	3,595 (7.5%)	132 (2.7%)	109 (2.9%)	619 (6.9%)
Bachelor's Degree	61, 196 (16.1%)	7,859 (16.4%)	484 (9.8%)	370 (10%)	1,289 (14.3%)
Graduate or professional Degree	32,611 (8.6%)	5,109 (10.6%)	240 (4.9%)	158 (4.3%)	525 (5.8%)
Employment Status					
Unemployment Rate 8/09	7.2%	6.4%	13%	13.5%	5.4%

Alaska's workforce continues to age. Twenty-six percent of the Alaskan workforce is age 51 to 65. This equates to 113,000 people or almost 25 percent of Alaska's workforce. By contrast Alaskans age 15 to 24 totals 109,000. This means that the gap in the workforce created by the aging out of workers equates to 10,000 real people who will not be replacing the older workers. As the workforce ages it is critical that younger

workers rapidly develop the skills to replace the years of technical expertise lost. The easiest way to mitigate the need for skill development is through intensive training.

An investment in Alaska's renewable energy and energy efficiency sector leads to a transformation of the workforce. In rural areas utility companies will hire skilled operators, office personnel and maintenance workers. As energy efficiency technology is deployed, residential units across the state will require rehabilitation. As new standards for commercial and public buildings are established the demand for weatherization technicians, energy raters and system designers will increase. The rapid infusion of ARRA capital jump started this transformation. The industry recognizes the need to prepare the workforce.

- **Applicants must fully demonstrate they have a comprehensive and representative partnership reflecting the industry**

A comprehensive and representative partnership was assembled by the Alaska Workforce Investment Board (AWIB) reflecting energy efficiency and renewable energy industries in Alaska. The Alaska State Energy Sector Partnership (ASESP) will serve as the steering committee throughout the life of the grant to participate in the planning and support the implementation of the State's energy sector strategy. The AWIB will lead the ASESP and serve as the managing partner responsible for coordination and management of the partnership, including the overall planning, implementation, oversight, and technical assistance of the ASESP operations and project teams.

The ASESP include; the Alaska Department of Labor and Workforce Developments, Division of Business Partnerships (DBP), the state's Workforce Agency, the Employment Security Division (ESD) the state's One-Stop service delivery provider and Alaska Workforce Investment Board, the state's entity serving as the local board in Alaska's regional planning area. The Alaska AFL-CIO represents organized labor and the Alaska Energy Authority (AEA), Denali Commission and Alaska Housing Finance Corporation (AHFC) represent cabinet level officials from the energy sector, economic development and the state's investment in energy efficiency.

Other entities participating in the ASESP include Alaska Works Partnership (AWP), the U.S. Office of Apprenticeship, the Alaska Departments of Transportation and Public Facilities (DOT) and Education and Early Development (DEED), the education and training community including the University of Alaska, Alaska Vocational Technical Center, and Joint Apprenticeship Training Trusts such as the Alaska Joint Electrical Apprenticeship Training Trust and Fairbanks Plumbers and Pipefitters Training Center.

This original membership was selected based on guidance from cabinet level officials on energy. Additional members will be added to the ASESP to help facilitate and assist with the formation of the State Energy Sector Plan. Possible additions to the planning process include the Alaska Village Electric Cooperative, winner of 2007 Wind Cooperative of the Year and the Renewable Energy Alaska Project, an advocacy group representing state utilities and other existing power generation and transmission entities.

- **Sector Plan and Roles and Responsibilities of Members**

The AWIB and two divisions within the Alaska Department of Labor and Workforce Development (DOLWD), the Divisions of Business Partnerships and Employment Security will provide a coordinated and aligned approach to meeting the energy sector's workforce needs. The DBP will serve as the administrative and fiscal agent for the grant and provide representation on state registered apprenticeship issues. The ESD will serve as the One-Stop delivery system and represent veterans' services through the state Job Center network. In addition the One-Stop will work closely with training providers and entities selected to recruit, assess, train and place workers in the energy efficiency and renewable energy industries.

The AEA provides a direct link to renewable energy projects throughout the state that are expected to receive public funding including wind, hydro, geothermal and biomass and other energy projects. A sample of the AEA projects is listed below.

Energy Region	Applicant Type	Project Type	Project Cost
Aleutians	IPP	Wind	$3,104,443
Lower Yukon-Kuskokwim	Government	Hydro	$400,000
North Slope	Government	Transmission	$14,000,000
Aleutians	Utility	Heat Recovery	$2,011,412
Aleutians	Utility	Other	$900,000
Yukon-Koyukuk/Upper Tanana	Government	Biomass	$1,540,023
Yukon-Koyukuk/Upper Tanana	Government	Biomass	$1,308,500
Northwest Arctic	Government	Heat Recovery	$500,000
Northwest Arctic	Utility	Heat Recovery	$1,215,627
Southeast	Utility	Hydro	$2,440,000
Copper River/Chugach	Utility	Hydro	$4,659,500

Energy Region	Applicant Type	Project Type	Project Cost
Lower Yukon-Kuskokwim	Utility	Wind	$3,360,000
Southeast	Utility	Heat Recovery	$617,934
Yukon-Koyukuk/Upper Tanana	Government	Biomass	$43,940
Kodiak	Utility	Hydro	$15,907,950
Copper River/Chugach	Government	Wind	$1,672,388
Copper River/Chugach	Utility	Hydro	$6,300,000
Bering Straits	Utility	Wind	$2,727,960
Bering Straits	Utility	Wind	$4,436,800
Bristol Bay	Utility	Ocean/River	$2,396,830
North Slope	Government	Heat Recovery	$4,257,116
Lower Yukon-Kuskokwim	Utility	Wind	$10,733,179
Southeast	Government	Biomass	$220,179
Rail Belt	IPP	Wind	$21,000,000
North Slope	Government	Heat Recovery	$3,612,000
Aleutians	Government	Hydro	$1,795,450
Yukon-Koyukuk/Upper Tanana	Government	Biomass	$1,300,000
Aleutians	Government	Geothermal	$45,000,000
Yukon-Koyukuk/Upper Tanana	IPP	Wind	$8,100,000
		TOTAL	**$165,561,231**

Alaska Energy Authority 2009

The AHFC trains energy raters and assessors and will assist with training strategies for workers engaged in weatherization and energy efficiency projects and identify employers authorized to perform weatherization work that meets industry standards.

The Alaska AFL-CIO will represent labor organizations and provide input in support of labor-management training programs including the Joint Apprenticeship Training Centers for related energy efficiency and renewable energy occupations. The Jointly

Administered Apprenticeship Programs have state of the art training to meet industry standards in a variety of occupations related to the energy sector.

The Denali Commission is an economic development entity and funds energy related projects throughout rural Alaska. The Commission designates funding for job training related to the projects it funds.

The University of Alaska is the state's leader in developing residential energy efficiency strategies and provides training in a wide variety of renewable energy strategies. The University recently applied for a "Pathways out of Poverty" grant with an emphasis on training rural residents on the operation and maintenance of biomass energy systems.

The U.S. Office of Apprenticeship is ready to develop appropriate registered apprenticeship programs related to energy efficiency and renewable energy sectors. The U.S. Office of Apprenticeship in partnership with the DBP is expanding the One-Stop's capacity to draft standards of instruction and develop registered apprenticeships throughout the state.

Alaska Works Partnership (AWP) is the AHFC and Denali Commission's training provider for Weatherization and a sponsor for Building Maintenance and Repair apprenticeship. AWP is also associated with the Alaska Construction Academies providing training for the adult component of the program.

The DOT is committed to training underrepresented and disadvantaged populations. The DOT represents almost $10 million in ARRA fund energy efficiency projects that are "shovel ready" and will make an excellent training ground for new workers.

- **Leveraged Funds**

Funds will be leveraged by working with other agencies who have received ARRA funding including AHFC, AEA, Denali Commission, and DOT. In 2008, the state legislature created the Alaska Renewable Energy Grant Fund to invest $300 million in renewable energy and another $360 million of state funds for residential weatherization and home energy rebates. AHFC immediately launched an aggressive plan to create a robust energy efficiency workforce that could weatherize thousands of homes.

The partners of ASESP have committed to leveraging more than $700 million in renewable energy and energy efficiency projects. The combined projects require more than 4,000 workers in a wide variety of crafts including weatherization technicians, electricians, power plant operators, maintenance workers, energy raters, wind technicians, welders, and office and administrative workers.

The DOLWD also brings significant training resources to the partnership. More than $20 million in state and federal funds are currently budgeted for job training in Alaska high wage, high demand occupations. This includes more than $10 million in state funds that support career awareness, work experience and job training. In partnership with the Career and Technical Education component of DEED, curriculum is being

developed that reflects energy efficiency and through strategies such as the Teacher Industry Externships students are obtaining first hand information about the demands of working in the energy industry.

The coordination provided by the state's strategic training plan and the Workforce Investment Act/Wagner-Peyser Act State Plans help align resources in support of the construction , oil, gas and mining and healthcare industries and provides direction for the establishment of the ASESP.

- **ASESP strategy for training the energy efficiency and renewable energy workforce**

The DOLWD Research and Analysis Section estimates there are over 4,000 "green job" opportunities connected with the nearly $1 Billion investment by the State, Federal and Local Governments and more than $2 Billion investment by utilities, business and industry, and homeowners. Initial strategic planning resulted in a set of strategies to meet the demand for workers related to weatherization and renewable energy projects, for upgrading skills of workers with transferable construction, power generation, and utility operations skills, for teaching new skills in green technologies to trade apprentices and entry-level workers preparing to enter energy efficiency jobs and careers, and for developing professionals and technicians to assess analyze and supervise energy efficiency serving residential, commercial, institutional and industrial

sectors. On-going planning by the ASESP during this project will continue to identify occupational skills training needs to meet the demands of industry and employers.

The core training strategies are: (1) upgrade the skills of incumbent crafts and trades workers and apprentices involved in occupations expected to experience a significant increase in employment demand such as occupations in construction, power generation and transmission, and weatherization. (2) Training for older youth and new workers entering green jobs who require basic skills and pre-employment certificates. (3) Training for workers who will experience significant change to the work and technical requirements for employment such as utility and facility operators. (4) Workers in emerging green occupations such as biomass, hybrid energy, and energy assessment using new diagnostic methods and technologies. (5) Career ladder courses offering continued training so older youth and incumbent workers may advance in green occupation careers.

Allocation of training resources are guided by the ASESP's strategic plan and distributed through the DBP's competitive grant process. Training grants will ensure that every geographic and economic region of Alaska is served, particularly rural and remote communities where the target populations, high energy costs, and jobs will be located. Where appropriate, established workforce trainers with the known ability to provide green occupational training and are capable of educating and training large numbers of participants statewide will be engaged as program operators. Job center case managers will assist participants and provide support services through the

Workforce Investment Act, Wagner-Peyser Act and the State Training and Employment Program.

- **Priority populations, service challenges and strategies for resolving challenges.**

Priority populations fall into distinct categories designated by the Workforce Investment Act/Wagner-Peyser Act State Plans. Categories include recipients of public assistance, veterans, people with disabilities, low income individuals, unemployed and under-employed individuals, dislocated workers, out-of-school youth, and incumbent workers that require specific skills upgrade training to retain employment, and non-traditional workers and minorities who are underrepresented in industry occupations.

- **Describe projects and rationale for selection including geographic factors, qualifications of team members, recruitment, training, placement and retention strategies.**

The AWIB recognizes the need to serve individuals statewide, particularly those living in rural and remote communities where there are few jobs, high rates of poverty unemployment, the costs of living and energy are high, and the need for weatherization and renewable energy are great. Alaska's unique geographic challenges have led to innovative methods for training the workforce. Alaska's One-Stop service system, through its 23 Job Centers, reaches a wide segment of Alaska's population. Those not directly reached by these Job Centers are assisted by a network of cooperative agreements with a variety of service providers who provide outreach to remote

communities. Job centers are located throughout Alaska; Anchorage, Barrow, Bristol Bay (Dillingham), Eagle River, Fairbanks, Glennallen, Homer, Juneau, Ketchikan, Kodiak, Kotzebue, Mat-Su, Nome, Peninsula (Kenai), Seward, Sitka, Tok, Valdez and Yukon-Kuskokwim Delta (Bethel). The University of Alaska has 16 campuses that provide education and training for occupations vital to Alaska's economy. Each region of the state has established Regional Training Centers who are One-Stop partners and provide locations for rapidly deploying industry training. Trade apprenticeship and training programs are qualified industry trainers who provide course related instruction and hands-on skills training on an on-going basis. Alaska Native non-profit employment and training entities and industry trainers enhance the system with mobile and distance education to provide, to the greatest extent possible, training in the community or regions making attending training more convenient for individuals. Educators specialize in delivering remedial education to enrich literacy, math and technical knowledge among diverse populations integrated with industry training to meet the needs of employers. Initial training for green occupations is aimed at supplying workers for weatherization and renewable energy projects that are funded and "shovel ready" through the Alaska Energy Authority, Alaska Department of Transportation, Alaska Housing Finance Corporation and Denali Commission. Training grants and contracts will target categories of energy efficiency technologies identified by Alaska State Energy Sector Partners. Additional training strategies will be introduced as new technologies emerge.

1. The energy-efficient building, construction, and retrofit industries.
2. The renewable electric power industry.
3. The bio-fuel industry.
4. The energy efficiency assessment industry serving residential, commercial, or industrial sectors.

1. Recruitment												
Timeline by Quarter	***1***	***2***	***3***	***4***	***5***	***6***	***7***	***8***	***9***	***10***	***11***	***12***
Grantees are selected. They begin outreach and recruitment for training / semi-annual grants		X		X		X		X		X		
Alaska Job Centers Network / Local Job Centers assist individuals applying for training; case management begins and is on-going		X	X	X	X	X	X	X	X	X	X	
Employers, Apprenticeship Sponsors, Program operators recruit trainees, on-going		X	X	X	X	X	X	X	X	X	X	
State Agencies involved in green occupations recruit trainees in conjunction with training providers and Local Job Centers		X	X	X	X	X	X	X	X	X	X	X

Recruitment

Each partner has effective outreach and recruitment methods already engaged for this project. Information about training, employment, apprenticeship openings are regularly distributed through an established network that connects employers, job centers, Alaska Native organizations and public outlets. Job training and apprentice opportunity notices are sent by mail, fax, e-mail, and posted on websites. Toll-free phone contacts are given. Regional Training Centers, employers, weatherization firms and apprentice programs are able to recruit in communities where jobs will be

available. The partners will schedule training to meet the employer time frames and in locations most convenient for participants. Employers with renewable energy development projects will provide recruitment information as their projects come on-line in order to prepare participants for those jobs.

Training

Training will employ several methods of instruction including course related instruction, hands-on skills demonstration, apprenticeship structured learning, and on-the-job training. Training will be provided by qualified instructors supplied by Eligible Training Providers, apprenticeship and training programs, post-secondary institutions and industry trainers. An estimated 700 individuals will be trained.

2. Training												
Timeline by Quarter	***1***	***2***	***3***	***4***	***5***	***6***	***7***	***8***	***9***	***10***	***11***	***12***
Grantees begin training, training is on-going		X	X	X	X	X	X	X	X	X	X	
Program operators begin training, training is on-going		X	X	X	X	X	X	X	X	X	X	
Apprenticeship program begin training; training is on-going		X	X	X	X	X	X	X	X	X	X	
Professional Development Courses to Advance Energy Assessors, Analysts, Technicians training is on-going		X	X	X	X	X	X	X	X	X	X	X

All instructors use existing curriculum with adaptations for construction methods performed in Alaska's coastal and cold climate regions. Weatherization courses follow the Building Performance Institute model for competency based training. New curriculum may be developed outside of this proposal to meet evolving industry standards.

3. Employment												
Timeline by Quarter January 2010 – December 2012	***1***	***2***	***3***	***4***	***5***	***6***	***7***	***8***	***9***	***10***	***11***	***12***
Regional Housing Authorities employ trainees on residential renovations and weatherization projects		X	X	X	X	X	X	X	X	X	X	X
Weatherization firms employ trainees for state and federal funded residential weatherization projects		X	X	X	X	X	X	X	X	X	X	X
Contractors and employers hire apprentices who receive EE and RE skills training		X	X	X	X	X	X	X	X	X	X	X
Regional Housing Authorities, Weatherization Firms, public agencies and contractors hire energy raters, auditors, other EE technicians		X	X	X	X	X	X	X	X	X	X	X
Renewable Energy project developers, utilities, and contractors hire workers with EE skills		X	X	X	X	X	X	X	X	X		X

Logistic tasks include securing training sites, scheduling travel for instructors, shipping instruction materials and equipment, and scheduling travel, housing, and meals for trainees who must leave their community for training. Courses related to the following occupations are planned.

Qualified instructors will deliver training using industry standard curriculum. Instructors will demonstrate skills and supervise hands-on training. Industry and government certificates are provided to each individual who successfully completes training. Trained individuals will be referred for jobs and apprentice positions, or retained in employment with new skills.

Placement & Retention

The commitment to employ trained workers is established with ASESP partners and connected employers, labor organizations and apprentice sponsors. Individuals will be aided by follow-up job placement and support services, and additional energy efficiency courses. Alaska's One-Stop service system and training providers work as a team to assist participants gain employment in a green sector occupation. The Department of Labor and Workforce Development has instituted and implemented a computerized program called, "ALEXsys." ALEXsys is a powerful online job seeker/workforce services system, accessed as a web site on the Internet or an Intranet at an Alaska Job Center. This employment tool was specifically designed for job seekers, students, case managers, employers, training providers, workforce professionals, and others seeking benefits and services.

- **Describe the fiscal, administrative and performance management capacity including leadership of ASESP and coordination of regional teams.**

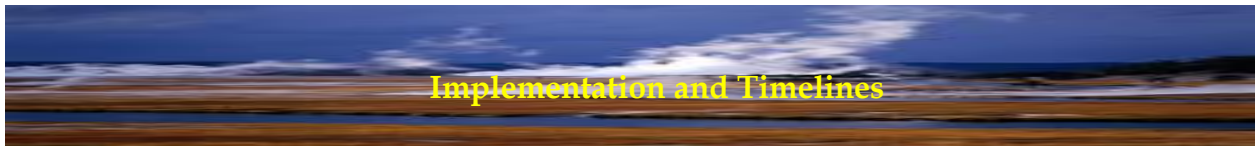
The Alaska Department of Labor and Workforce Development, Division of Business Partnerships is the state's workforce agency. The division successfully manages more

than $50 million in job training funds annually. As a single area state, the state workforce agency manages the fiscal, administrative and performance management of the state's workforce investment system. More than 55 percent of the funds administered are federal funds from the U.S. Department of Labor.

Annually the division issues more than 120 grants and reimbursable agreements to private and public entities providing job training services. The division performs on sight monitoring of approximately 25 percent of the grantees and desk monitoring of the rest. Using a team based approach each grant award is supported by a Program Coordinator and Grants Administrator. The Staff assigned are evaluated as fully proficient, able to handle the most complex issues. In support of the immediate staff are the Supervisory Program Coordinator II and Grants Administrator III who work to resolve issues that impede service delivery or affect performance.

The division is responsible for meeting and reporting on the state's Workforce Investment Act performance as well as performance related to the state's performance management system. Under the division's management the workforce investment system has consistently met or exceeded all federal and state performance measures for the past five years. The division's technical unit is responsible for designing data collection systems and comparing that data to other division data such as the Unemployment Wage Record which the division uses to assess participant outcomes and program performance. The data collection systems are currently being upgraded and will have increased capacity for data analysis through a data warehousing model.

Management of the Alaska State Energy Sector Partnership will be under the authority of the Alaska Workforce Investment Board Director and staff. The AWIB is organized in a way that promotes effective management of the ASESP. Through the Regional Advisory Councils the AWIB is able to assess the workforce needs of the state regions and advocate with the legislature and the state workforce agency to ensure effective implementation of workforce development policy. The AWIB has managed several similar projects from start up to sustainability. The best example is the Alaska Construction Industry Coalition. In 2001 The AWIB convened leaders from the industry, identified barriers to meeting the industry workforce needs and developed a long range plan to address the construction industry needs. Today the AWIB continues to provide advocacy and support for the construction industry and was recently approached by the Healthcare industry to provide similar support. The AWIB will apply the Workforce Innovations and Regional Economic Development 6 Step Method for managing the ASESP.



Goal	Task	Year 1				Year 2				Year 3				Staff	How Measured
		Q 1	Q 2	Q 3	Q 4	Q 1	Q 2	Q 3	Q 4	Q 1	Q 2	Q 3	Q 4		
Start-Up, Strategic Planning, Grant Admin	ASESP Strategic plan complete. Grant process initiated	X	X	X										AWIB Director, DBP Director & Staff	Strategic Plan submitted to AWIB RFP issued

Goal	Task	Year 1				Year 2				Year 3				Staff	How Measured
Outreach & Recruitment	Train Job Centers. Notify vendors, Develop marketing materials		X	X	X	X	X	X	X	X				DBP PCI and GAII from	Job centers refer participant. Grant applicants submit proposals
Intake & Assessment	Trainees selected, Referred, Barriers assessed, Support services planned.			X	X	X	X	X	X	X				PCI, grantee and job center staff	Target trainees selected, Assess needs and fund with WIA, STEP
Training	Case manageme nt, Training delivered			X	X	X	X	X	X	X	X			Job Center Staff Training Providers	Case records Attendance Record
Placement	Worksites contact				X	X	X	X	X	X	X	X	X	Job Centers. Grantees, Training Providers	Participants report employment
Retention	Wage records, compare to Program data							X	X	X	X	X	X	R&A and DBP	Quarterly performance reprt reveals achieved.
Evaluation	Analysis program data to measure results										X	X	X	ETA external reviewer	Report from reviewer
Sustainability	ASESP adopts long term plan.										X	X	X	AWIB ASESP	Sustained via other fund source.

- **Implementation Narrative**

Project Start Up

The AWIB will conduct monthly meetings with the ASESP members to determine the need for additional participants and to complete the strategic planning process that will provide guidance for the competitive solicitation process.

The DBP will use the ASESP strategic plan to draft a competitive request for proposal that is issued annually subject to updates of the plan by the ASESP. Competitive process includes; drafting the solicitation based on the strategic plan, budgeting funds for solicitation, designing an evaluation and selection model, publishing the solicitation and responding to questions, facilitating review and selection of proposals and negotiating grant agreements.

Outreach and Recruitment

Develop a comprehensive outreach and recruitment strategy that defines a clear process for finding and referring workers to training programs identifying targeted populations by project. Work with competitively selected training providers such as, the Joint Apprenticeship Training Trusts, University of Alaska, AWP, and Alaska Vocational Technical Education Center. Train job center personnel to make appropriate referrals.

Intake and Assessment

Develop assessment criteria, select participants, determine participant barriers to training and provide case management services as necessary. Involve employers in the selection of incumbent and new to the industry participants.

Training

Provide training based on criteria selected by ASESP. Assess provider's capacity to deliver training, affirm that training providers are meeting industry standards. Work closely with industry group via ASESP to ensure clear communication regarding participants and outcomes.

Placement

Offer assistance to employers necessary to secure employment for participants that successfully complete training. Assess barriers to employment and address.

Retention

Monitor placement and provide appropriate post employment services through the job center. Address employer concerns through training and technical assistance.

Evaluation

The DBP has a strong data collection system that provides analysis for Workforce Investment Act programs. This data will be compared to data from the unemployment wage record to determine the effectiveness of various strategies. Based upon that assessment the Division will integrate effective strategies into other service delivery models.

Sustainability

The core of Alaska's sustainability model is predicated on the integration of effective policy from the ASESP and the AWIB. It is expected that along with a formal sustainability plan the AWIB will align much of its workforce development policy for the energy sector with other sectors and goals such as preparing a workforce to build the Alaska natural gas line. This is proving to be an effective approach for the AWIB to obtain desired results from the existing Workforce Investment System.

Performance Measure	Target for Performance	Actual Performance
Outreach and Recruitment	At least 1,000 applicants will be recruited and considered for training	To be determined upon completion of the recruitment
Participants to be served	At least 700 participants recruited will be served.	To be determined upon completion of the grant
Enrolled in Training	At least 700 participants will be enrolled in Training	To be determined upon completion of grant funded training
Successfully complete Training and earn a degree or certificate	At least 665 or 95% of 700 enrolled in training will complete.	To be determined upon completion of grant funded training
Entered Employment: Unsubsidized (Except Registered Apprentices)	At least 90% of the participants that successfully complete training will be employed.	To be determined upon completion of the grant
Entered Employment or registered apprenticeship in an Occupation related to training	Of those who enter unsubsidized employment or apprenticeship at least 90% will be employed an occupation related to their training.	To be determined upon completion of the grant
Retention of all who enter employment within one year of completing training	At least 90% of participants that enter employment or registered apprenticeship will retain employment for two quarters following placement.	To be determined upon completion of the grant

Suitability for Evaluation

The ASESP will assist an outside evaluator selected by USDOL with input from the ASESP Partnership. The DOLWD Research and Analysis Department have internal staff that performs rigorous research for DOLWD, the Legislature, and other entities. The DOLWD offers a state of the art Management Information System data collection system with direct links to the Research and Analysis Section for establishing client outcomes such as employment, gain in earnings, location of employment, industry, age, education level, ethnicity, and other information. The ASESP partners are experienced with working with academic, social science, and private researchers.

Funding will benefit individuals and communities not directly served by the program in a number of ways: families will gain more income, workers with energy efficiency skills can weatherize homes of others, communities with new renewable energy projects have skilled technicians to operate and maintain energy plants, unemployment is reduced and more Alaskans are qualified to take care of Alaska's future energy efficiency needs.

Appendix 1

Alaska Regional Advisory Councils

Region and Name of Organization	Contact Name	E-Mail
ANCHORAGE – Education Workforce Advisory Commission	Anne Reed	areed@acsalaska.net
INTERIOR - Interior Alaska Regional Council http://www.interioralaskaworkforce.org	Jim Lynch	jim.lynch@bannerhealth.com
KENAI - Kenai Peninsula Development Council	Diana Spann	dianna.spann@alaska.gov
MAT-SU	Marty Metiva	matsurcd@mtaonline.net
NORTH SLOPE - North Slope Workforce Development Council	Charlotte Brower	charlotte.brower@north-slope.org
NORTHWEST – Northwest Arctic Workforce Development	Cheryl Edenshaw	cedenshaw@nwarctic.org
SOUTHEAST South East Conference http://www.seconference.org	Shelly Wright	shellyw@seconference.org
SOUTHWEST - South West Alaska Municipal Conference http://www.swamc.org	Michael Catsi	mcatsi@swamc.org
WESTERN COASTAL REGION Bethel Job Center	Barbara Cowboy	barbara.cowboy@alaska.gov

Appendix 2

Alaska Regional Training Centers

Definition

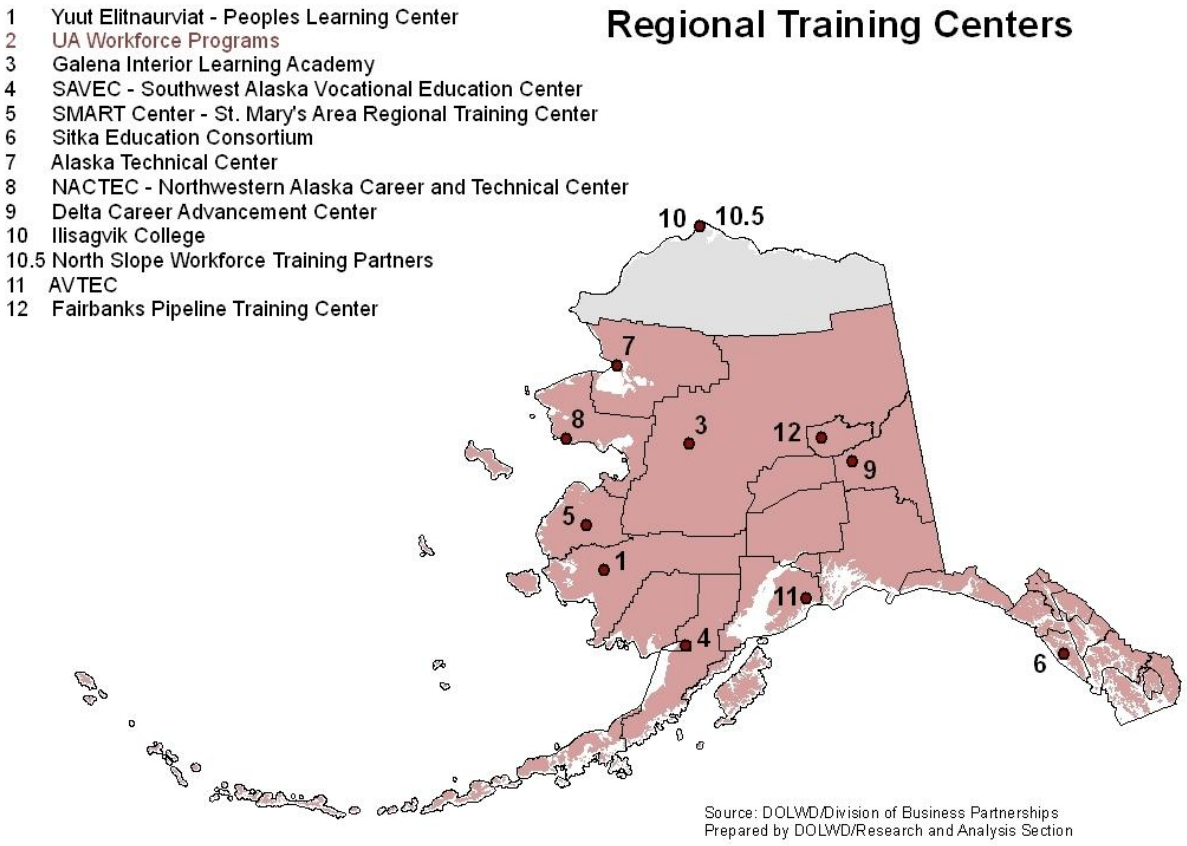
Alaska's Regional Training Centers (RTC's) are public or non-profit centers created through regional and state partnerships. They were created by partners whose mission is to focus on workforce development and educational activities linked to employment opportunities in Alaska. RTC's provide coordinated workforce development, education, and training in conjunction with local and statewide partners to prepare its citizens to enter into the Alaskan Workforce.

Characteristics of RTC's include:

- Regional and state partnerships include the following organizations:
  - Industry
  - Alaska Native, Regional and Community organizations
  - Economic development entities
  - Local boroughs, city, state and tribal governments
  - Registered Apprenticeships (union and non-union)
  - K-12 and university educational institutions
  - Alaska Department of Labor and Workforce Development One-Stop Career Centers
  - AWIB Regional Advisory Councils (RAC's)
- Career pathway articulation from K-12 to post-secondary education and training.
- Assist participants' transition from K-12 to valued careers, including registered apprenticeship and recertification courses for adults.
- Incorporate career and technical education standard-based curriculum, certification and credentials.
- Use industry-based standards to prepare youth and adults for the Alaskan Workforce
- Governed by a regional or state board.

Appendix 3

Map of RTC's



Appendix 4

Relative scaled comparison of Alaska to the lower forty-eight states. At 586,400 square miles Alaska is as wide as the lower forty-eight states and larger than California, Montana and Texas Combined.